

A key to the genera of the Phasmatodea: Areolatae (Insecta)

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Abstract

Following the systematic arrangement established by Zompro (2004), a key is presented to all genera of the Phasmatodea: Areolatae (Insecta). For the first time, it allows a determination of eggs down to the generic level.

Key words

Phasmida, Phasmatodea, systematics, phylogeny, key, genera, eggs.

Introduction

The systematic arrangement of and the phylogenetic relationships within the insect order Phasmatodea have not been sufficiently researched. The phylogeny of the Areolatae was clarified and discussed by Zompro (2004). As a result, the Phasmatodea is subdivided into the suborders Agathemerodea with the single genus *Agathemera* Stål, 1875 and the Verophasmatodea, which contain all other Recent phasmids and the extinct Archipseudophasmatidae, which are only known from Eocene Baltic amber. Within Verophasmatodea, the Phyllioidea with the single family Phylliidae is the sister group to all other Recent phasmids of the Areolatae and the Anareolatae. In all probability, the Anareolatae are simply derived Areolatae and all of their subgroups can be attached to subtaxa of Areolatae. The attachment of the families of Areolatae is as follows:

Phasmatodea	= Verophasmatodea + Agathemerodea.
Verophasmatodea	= (Areolatae + Anareolatae) + Phyllioidea.
Areolatae	= (Aschiphasmatoidea + (Pseudophasmatoidea + Bacilloidea)).
Aschiphasmatoidea	= Damasippoididae + Prisopodidae + Aschiphasmatidae.
Pseudophasmatoidea	= Pseudophasmatidae + Heteronemiidae.
Bacilloidea	= Heteropterygidae + Anisacanthidae + Bacillidae.

Four generic synonyms have been traced in that work: *Brachyelena* Hebard, 1933 is a synonym of *Decidia* Stål, 1875, *Harpuna* Redtenbacher, 1906 of *Xerosoma* Audinet-Serville, 1831, *Phaeophasma* Redtenbacher, 1906 of *Dajaca* Brunner von Wattenwyl, 1893 and *Pinnispinus* Brock, 1995, of *Ommatopseudes* Günther, 1942.

Keys to genera of Phasmatodea: Areolatae

Key to Families: Adults

1. Abdominal segment I not fused with metanotum; tarsi pseudotrimeric (Timematodea)
- Abdominal segment I fused with metanotum 2. Phasmatodea
2. Meso- and metatibiae with area apicalis 3.
- Meso- and metatibiae without area apicalis Anareolatae
3. Area apicalis membranous, with a sclerotized area apically Agathemeridae
- Area apicalis completely sclerotized 4.
4. Tergites and sternites of abdomen foliaceously dilated; leaf like Phylliidae
- If abdomen dilated, tergites folded laterally; sternites weakly dilated 5.
5. Area apicalis with a spine or prosternum with three sensory areas 6.
- Area apicalis not spinose, prosternum with one sensory area at best 7.
6. Profemora straight or prosternum with at least two sensory areas . . Heteropterygidae
- Profemora curved and compressed basally, without sensory areas . . Anisacanthidae
7. Antennae at best as long as profemora Bacillidae
- Antennae considerably longer than profemora 8.
8. ♂ metasternum with a segmented appendix in an excavation, ♀ metabasitarsus serrate

- ventrolaterally Damasippoididae: *Damasippoides*
- Different 9.
- 9. Meso- and metafemora not carinate ventromedially and profemora distinctly shorter than head, pronotum and mesonotum combined 10.
- Different; if meso- and metafemora not carinate ventromedially, then profemora longer than head, pronotum and mesonotum combined 11.
- 10. Tegmina present, scale-shaped or longer Prisopodidae
- Tegmina spiniform, filiform or absent Aschiphasmataidae
- 11. Profemora with three edges, edges lamellate Heteronemiidae
- Profemora with four edges Pseudophasmataidae

Key to Families: Eggs

- (1. Micropylar plate small, micropyle placed near anterior margin of capsule Timematodea)
- If micropylar plate small, then micropyle not near anterior margin of capsule Phasmata: Areolatae: 2.
- 2. Capsule cork-like, internal micropylar plate surrounded by fringes Phylliidae
- Capsule and internal micropylar plate different 3.
- 3. Capitulum present 4.
- Capitulum absent 5.
- 4. Micropylar plate elongate oval, half as long as capsule, capsule strongly shiny Damasippoididae: *Damasippoides*
- Micropylar plate lanceolate, more than half as long as capsule, median line present Bacillidae: Macyniinae: *Macynia*
- 5. Operculum inserted at an angle of 45°; micropylar plate projecting anteriorly *Pseudodatames*
- Egg different, micropylar plate not projecting anteriorly 6.
- 6. Internal micropylar plate open 7.
- Internal micropylar plate closed 11.
- 7. Micropylar plate expanded at least posterolaterally Heteropterygidae
- Micropylar plate different 8.
- 8. Capsule long, cylindrical, micropylar plate almost as long as capsule Agathemeridae
- If capsule cylindrical, micropylar plate shorter 9.
- 9. Capsule with a smooth, longitudinal area ventrally Prisopodidae
- Capsule not differentiated ventrally 10.
- 10. Micropylar plate small, micropyle inserted close to polar area Heteronemiidae
- Micropyle inserted closer to the middle of capsule Pseudophasmataidae
- 11. Micropylar plate surrounding capsule completely Aschiphasmataidae
- Micropylar plate distinctly shorter 12.
- 12. Capsule not distinctly marginated anteriorly Anisacanthidae
- Capsule with an elevated margin anteriorly; if margin indistinct, then capsule with irregular ridges Bacillidae

Aschiphasmatoidea

Prisopodidae

Key to Genera: Adults

1. Tegmina long, radial vein of alae branched 2. Prisopodinae
- Tegmina scale-shaped, radial vein of alae not branched 6. Korinninae
2. Tegmina projecting beyond abdominal segment II 3. Prisopodini
- Tegmina distinctly shorter 5. Paraprisopodini
3. Profemora serrate ventrally *Prisopus*
- Profemora smooth ventrally 4.
4. Head flat, body and tegmina greyish. Anal fan of alae at best weakly marginated *Dinelytron*
- Head globose, body and tegmina often colourful. Anal fan marginated posteriorly *Damasippus*
5. Profemora serrate ventrally, head and thorax spinose *Paraprisopus*
- Profemora smooth ventrally, abdomen strongly elongated *Melophasma*
6. Profemora curved basally, alae at best tinted *Korinnis*
- Profemora straight basally, alae strongly coloured *Kalocorinnis*

Key to genera: Eggs

1. Egg capsule circled by a sharp ridge laterally *Kalocorinnis*
- Egg capsule not circled by a sharp ridge laterally 2.
2. Operculum inserted in anterior end of capsule *Paraprisopus*
- Operculum inserted at a distinct angle 3.
3. Capsule cylindrical, operculum inserted in anterior half of dorsal surface *Prisopus*
- Operculum inserted at an angle of about 45° *Damasippus*

Aschiphasmatidae

Key to Genera: Adults

1. Profemora undulate ventrally Xylobistinae: *Xylobistus*
- Profemora smooth ventrally 2. Aschiphasmatinae
2. Ungues not serrate Dajacini: *Dajaca*
- Ungues serrate 3. Aschiphasmatini
3. Profemora curved and compressed basally, if not, mesonotum with a spine 4.
- Profemora straight, mesonotum without posteromedial spine 14. *Aschiphasma*-group
4. Pronotum with a spine medioposteriorly 5.
- Pronotum without spine medioposteriorly 6.
5. Pronotum flat, not strikingly armed *Dinophasma*
- Pronotum with two large tubercles anteriorly *Ommatopseudes*
6. Pronotum armed with two horns anteriorly *Parabrosoma*
- Pronotum not armed 7.
7. In alae anal fan of uniform colour 8. *Abrosoma*-group
- In alae anal fan with broad margin posteriorly 11. *Eurybistus*-group
8. Tegmina absent *Abrosoma*
- Tegmina present 9.

- 9. Femora and tibiae unarmed *Anoplobistus*
- Ventral carinae of femora at least with some small spines 10.
- 10. Tegmina elongate triangular *Presbistus*
- Tegmina long and filiform *Yongtsuius*
- 11. Body green *Chlorobistus*
- Body brownish 12.
- 12. Cerci of male dorsoventrally flattened *Eurybistus*
- Cerci of male not dorsoventrally flattened 13. *Kerabistus*
- 13. Subgenital plate of ♀ without apical notch *K. (Kerabistus)*
- Subgenital plate of ♀ with apical notch *K. (Rhadinobistus)*
- 14. Pronotum longer than wide 15.
- Pronotum transverse *Aschiphasma*
- 15. At least alae present 16.
- Apterous *Leurophasma*
- 16. Tegmina present *Orthomeria*
- Tegmina absent *Coloratobistus*

Key to Genera: Eggs

- 1. Capsule round in lateral aspect, slightly depressed, strongly shiny, not setose *Xylobistus*
- Capsule mostly longer than high, if round, then more strongly depressed 2.
- 2. Capsule rounded trapezoidal in lateral aspect 8.
- Capsule oval or round in lateral aspect 3.
- 3. Capsule slightly depressed, round in lateral aspect and lateral surfaces convex *Aschiphasma*
- Capsule more strongly depressed, more oval, or lateral surfaces not convex 4.
- 4. Capsule oval in lateral aspect 5.
- Capsule at best slightly longer than high *Orthomeria*
- 5. Capsule strikingly smooth and shining *Coloratobistus*
- Capsule not shining, often setose 6.
- 6. Operculum inserted at a distinct angle *Ommatopseudes*
- Capsule oval in lateral aspect, operculum inserted roundly, without angle 7.
- 7. Capsule strongly setose *Dinophasma*
- Capsule weakly setose *Dajaca*
- 8. Capsule at best slightly longer than high *Presbistus* group
- Capsule distinctly longer than high *Chlorobistus* group

Pseudophasmatoidea

Pseudophasmatidae

Key to Subfamilies: Adults

- 1. Meso- and metafemora without ventromedian carina; often colourful Stratocleinae
- Meso- and metafemora with a distinct ventromedian carina, if this is indistinct, then profemora broader, at best as long as head, pro- and mesonotum combined 2.
- 2. Femora and tibiae lamellate and / or serrate dorsally and ventrally Xerosomatinae
- Femora and tibiae not serrate, sometimes broadened in apical one-third Pseudophasmatinae

Key to Subfamilies: Eggs

1. Capsule distinctly flattened laterally, surface without ridges Stratocleinae
- Capsule more oval or round in cross-section, not distinctly flattened laterally 2.
2. Micropylar plate, at least anteriorly, projecting over capsule 3. Xerosomatinae
- Micropylar plate inserted in dorsal surface of capsule 4. Pseudophasmatinae

Xerosomatinae**Key to Genera: Adults**

1. Exterodorsal and -ventral edges of profemora strikingly lamellate or with lobes dorsally 3. Prexaspini
- Exterodorsal and -ventral edges of profemora not lamellate, without lobes dorsally 2.
2. Femora and tibiae with striking groups of bristles Setosini: *Setosa*
- Femora and tibiae without striking groups of bristles 12. Xerosomatini
3. Alae of uniform colour or margined, not tessellate 10.
- Alae tessellate, or apterous 4.
4. In ♀ profemora strongly serrate, in ♂ mesonotum slender and elongated, not wider than head 9.
- Profemora at best bearing few, small teeth, in ♂ mesonotum as wide as head 5.
5. Mesonotum round in cross-section, not flattened dorsally 7.
- Mesonotum strikingly flattened dorsally, margined by distinct carinae 6. *Metriophasma*
6. Tegmina elongated oval in shape; body slenderer *M. (Metriophasma)*
- Tegmina rounded rhombic in shape; body broader *M. (Acanthometriotes)*
7. Mesonotum about three times as long as pronotum *Planudes*
- Mesonotum distinctly shorter 8.
8. Mesonotum not spinose. Tegmina without large spine *Periodes*
- Mesonotum with spines. Tegmina with a large spine *Olinta*
9. Meso- and metafemora with distinct carina ventromedially *Isagoras*
- Ventromedian carinae of meso- and metafemora indistinct *Periphloea*
10. Anal fan of alae uniformly coloured 11. *Prexaspes*
- Anal fan of alae with broad, darker margin *Oestrophora*
11. Anterolateral edges of tegmina produced as large teeth *P. (Prexaspes)*
- Anterolateral edges of tegmina produced as acute spines *P. (Elasia)*
12. Occiput at best with some tubercles 13.
- Occiput with diverging spines or lobes (if indistinct, habitus cricket-like) 14.
13. Pronotum bearing prominent spines or horns posteriorly; winged *Xerosoma*
- Pronotum at best granulate or tuberculate; apterous *Xera*
14. Less than 35mm; abdomen with raised median line; habitus cricket-like 19. *Grylloclonia*-group
- At least 35mm; dorsomedial line on abdomen interrupted or absent 15. *Acanthoclonia*-group
15. Profemora distinctly curved and compressed basally 16.
- Profemora straight, at best slightly compressed basally 18.
16. Scapus strikingly armed or carinate dorsomedially 17.
- Scapus not armed or carinate dorsomedially *Xylospinodes*
17. Scapus with raised carina dorsomedially *Creoxylus*
- Scapus with definite spines *Acanthoclonia*

- 18. Scapus not armed *Parobrimus*
- Scapus armed, in females genital valves strongly elongated *Mirophasma*
- 19. Mesonotum trapezoidal, wider anteriorly than posteriorly 20.
- Lateral margins of mesonotum parallel, prosternum with sensory area *Pachyphloea*
- 20. Abdominal segments transverse, more than 4 times as wide as long *Grylloclonia*
- Mesonotal median carina elevated, projecting and furcate anteriorly *Dicranoclonia*

Key to Genera: Eggs

- 1. Micropylar plate slightly projecting, at least inserted in capsule posteriorly 2. Prexaspiini
- Micropylar plate and area around it strongly projecting 4. Xerosomatini
- 2. Micropylar plate stronger projecting anteriorly than posteriorly *Metriophasma*
- Micropylar plate evenly projecting 3.
- 3. Micropylar plate surrounded by a complete margin *Isagoras*
- Margin of micropylar plate indistinct median line *Planudes*
- 4. Capsule only slightly depressed laterally, with prominent, irregular ridges *Xerosoma*
- Capsule distinctly depressed laterally 5.
- 5. Capsule very small, grey, operculum with deep hole in its centre *Xera*
- Operculum without deep hole in its centre 6.
- 6. Operculum with a long ridge medially *Xylospinodes*
- Operculum without ridge medially 7.
- 7. Surface of capsule punctured, operculum with a broad ring exteriorly *Creoxylus*
- Surface of capsule with tubercles or operculum with a broad ring and a cone 8.
- 8. Capsule tuberculate *Acanthoclonia*
- Operculum with a broad ring exteriorly and a cone centrally *Grylloclonia*

Pseudophasmatinae

Key to Genera: Adults

- 1. Profemora of both sexes distinctly longer than head, prothorax and mesothorax combined 2. Pseudophasmatini
- Profemora at best as long as head, prothorax and mesothorax combined 10. Anisomorhini
- 2. Meso- and metafemora broadened apically; antennomeres club shaped 3.
- Meso- and metafemora and antennomeres built normally 5.
- 3. Winged, profemora curved basally 4.
- Apterous, profemora straight basally *Paranisomorpha*
- 4. Posterolateral edges of abdominal segments not projecting *Reticulonigrum*
- Posterolateral edges of abdominal segments projecting *Ignacia*
- 5. Colourful, with yellow wings, body smooth, slightly shining *Tithonopasma*
- Wings brown 6.
- 6. Profemora straight basally 7.
- Profemora curved and compressed basally 8.
- 7. Alae fully developed, projecting beyond abdominal segment VIII *Pseudolcypoides*
- Alae abbreviated, distinctly shorter; body robust *Decidia*
- 8. In ♂ abdominal sternite IX on the right with long appendix dorsolaterally; in ♀ tegmina short, only slightly covering bases of alae 9.
- In ♂ abdominal sternite IX on the right without long appendix dorsolaterally; in ♀

- tegmina scale shaped, covering bases of alae *Alloeophasma*
9. Alae fully developed, mesonotum with a median line *Pseudophasma*
 - Mesonotum lacking median line; alae scale shaped and covered by tegmina
 *Neophasma*
10. Body strikingly smooth, often colourful and shining 14. *Anisomorpha* group
 - Body not shining, greyish or brownish, rarely partially spinulose
 11. *Urucumania* group
11. Profemora more or less straight 13.
 - Profemora distinctly curved and compressed basally 12.
12. Tegmina present, with striking, often colourful, net-like venation; in ♂ sternite IX on
 the right with long appendix dorsolaterally *Urucumania*
 - Tegmina present, rudimentary or totally lacking, greyish or brownish, not colourful,
 with simple venation; in ♂ abdominal sternite IX on the right without long appendix
 dorsolaterally *Malacomorpha*
13. Antennomeres simple; in ♂ abdominal sternite IX on the right with long appendix
 dorsolaterally *Peruphasma*
 - Antennomeres slightly club-shaped; in ♂ lateral edges of abdominal segment X
 elongated and projecting *Columbiophasma*
14. Mesonotum distinctly more than twice as long as pronotum; winged *Pteranisomorpha*
 - Mesonotum at best twice as long as pronotum; wings reduced 15.
15. Profemora slightly curved and compressed basally; third antennomere at best as long
 as pedicellus; body shining; meso- and metafemora not carinate medioventrally . . .
 *Anisomorpha*
 - Profemora straight; third antennomere longer than pedicellus 16.
16. In ♂ lateral edges of abdominal tergite IX elongated and projecting; body of ♀ more
 elongated *Autolyca*
 - In ♂ lateral edges of abdominal tergite IX not projecting; ♀ strikingly cricket-like 17.
17. Abdominal tergites II-VII smooth *Monticomorpha*
 - Abdominal tergites II-VII with a small hump posteromedially *Atratomorpha*

Key to Genera: Eggs

1. Micropylar plate circular, about as high as wide 2. Pseudophasmatini
 - Micropylar plate distinctly higher than wide, cordiform or oval 6. Anisomorphini
2. Capsule with prominent, irregular ridges 3.
 - Capsule with less prominent, slenderer ridges, rectangular or oval 5.
3. Ridges narrower than areas surrounded by them 4.
 - Ridges broader than areas surrounded by them *Neophasma*
4. Ridges connected *Reticulonigrum*
 - Ridges often interrupted *Pseudophasma*
5. Capsule oval in shape *Tithonophasma*
 - Dorsal and ventral surface of capsule parallel *Pseudolcyphides*
6. Micropylar plate with broad, angled margin, anterior part impressed *Malacomorpha*
 - Capsule at best with round, less prominent margin 7.
7. Micropylar plate without high ridges 8.
 - Micropylar plate with prominent, irregular ridges 10.
8. Micropylar plate more lanceolate in shape 9.
 - Micropylar plate more oval in shape *Monticomorpha*
9. Egg capsule slightly granulose *Autolyca*
 - Egg capsule almost smooth *Peruphasma*

- 10. Micropylar plate narrowed and more or less acute anteriorly 11.
- Micropylar plate semicircular anteriorly *Urucumania*
- 11. Operculum with a closed, circular ridge *Pteranisomorpha*
- Operculum with a cone in the middle *Anisomorpha*

Stratocleinae

Key to Genera: Adults

- 1. Profemora almost straight exteriorly, at best slightly curved inwards 2.
- Profemora distinctly curved and compressed basally 5.
- 2. In alae, anal fan of uniform colour 3.
- Anal fan with a whitish, translucent area basally, broadly margined 4.
- 3. Mesonotum spinose *Euphasma*
- Mesonotum lacking spines *Eucles*
- 4. Mesonotum as long as pronotum, head round, slightly globose *Stratocles*
- Mesonotum distinctly longer than pronotum *Parastratocles*
- 5. Body strikingly shining, alae of ♀ abbreviated *Anisa*
- Body at best slightly shining, alae of ♀ fully developed 6.
- 6. Dorsal carinae of profemora of same size, indistinct or absent 8.
- Interodorsal carina of profemora, especially in ♀, strongly raised 7.
- 7. Tegmina flat, comparatively long *Chlorophasma*
- Tegmina short, shouldered, shoulders sometimes pointed *Paraphasma*
- 8. Mesonotum only slightly longer than pronotum 9.
- Mesonotum more than 1.5 times as long as pronotum 10.
- 9. Head longer than wide, mesonotum slightly longer than pronotum . . . *Anthericonia*
- Head about as long as wide, mesonotum longer than pronotum *Brizoides*
- 10. Mesonotal median line produced as impression or two parallel ridges 11.
- Mesonotal median line not impressed, profemora elongate, slender *Olcyphides*
- 11. Edges of all femora rounded dorsally and ventrally *Holcooides*
- Profemora with distinct edges or median longitudinal impression 12.
- 12. Dorsal carinae of meso- and metafemora indistinct or rounded 13.
- Meso- and metafemora with carinae or median impression dorsally 14.
- 13. Meso- and metatibiae with indistinct carinae dorsally, not round *Holca*
- Meso- and metatibiae round dorsally *Tenerella*
- 14. Meso- and metatibiae round dorsally *Antherice*
- Meso- and metatibiae at least indistinctly carinate dorsally, not round 15.
- 15. Posterior margin of tegmina round *Agrostia*
- Tegmina pointed roundly posteriorly *Citrina*

Key to Genera: Eggs

- 1. Capsule strongly setose *Paraphasma*
- Surface of capsule not setose 2.
- 2. Lateral surfaces of capsule impressed *Holca*
- Capsule not impressed laterally 3.
- 3. Capsule strikingly elongate, more than 3 times as long as high *Citrina*
- Capsule distinctly shorter and more compact 4
- 4. Capsule light brown, strongly depressed laterally *Parastratocles*
- Capsule medium brown, only slightly depressed laterally *Stratocles*

Heteronemiidae**Key to Genera: Adults**

1. Median segment at least as long as metanotum 2. *Canuleius* group
- Median segment distinctly shorter than metanotum 5. *Heteronemia* group
2. Mesonotum more than 4 times as long as pronotum *Canuleius*
- Mesonotum less than 3 times as long as pronotum 3.
3. Mesonotum lacking definite spines *Pygirhynchus*
- Mesonotum spinose 4. *Ceroys*
4. Mesonotum at least 5 times as long as pronotum *C. (Ceroys)*
- Mesonotum about or slightly less than 4 times as long as pronotum *C. (Miroceroys)*
5. Head with two tubercles, vertex slightly raised *Spinonemia*
- Head flat, not armed 6.
6. Probasitarsus distinctly shorter than following four tarsomeres combined
- *Splendidonemia*
- Probasitarsus at least as long as following four tarsomeres combined 7.
7. Head about as long as pronotum *Heteronemia*
- Head distinctly longer than pronotum 8.
8. In ♂ abdominal segment IX as long as VIII; in ♀ thorax granulose *Xeropsis*
- Abdominal segment IX longer than VIII *Minteronemia*

Key to Genera: Eggs

1. Capsule almost symmetrically oval in lateral aspect 2.
- Capsule distinctly swollen and projecting dorsally 3.
2. Micropylar plate with broad, structured margin *Canuleius*
- Micropylar plate with simple margin *Heteronemia*
3. Capsule with strikingly deep, round impressions *Ceroys*
- Capsule different 4.
4. Micropylar plate with strikingly structured raised, broad margin *Spinonemia*
- Micropylar plate with simple margin *Xeropsis*

Bacilloidea**Heteropterygidae****Key to Subfamilies: Adults**

1. Area apicalis with a spine medio-apically 2.
- Area apicalis without spine medio-apically Dataminae
2. Prosternum without rough sensory areas Heteropteryginae
- Prosternum with two rough sensory areas Obriminae

Key to Subfamilies: Eggs

1. Capsule more or less spherical, not distinctly bullet-shaped. Operculum flat, not conical medially. If capsule strongly depressed laterally, then bearing setae that end in hooks Dataminae
- Capsule different; not round, if setose, then not strongly depressed laterally 2.
2. Capsule large, broad, not round; completely setose, if not, then operculum conical

- medially Heteropteryginae
- Capsule more slender; if setose, then operculum not conical medially Obriminae

Heteropteryginae

Key to Genera: Adult Males

- 1. Abdominal sternites II to VI with distinct, cingulate excavations laterally *Miniopteryx*
- Abdominal sternites II to VI without excavations 2.
- 2. Alae completely covered by tegmina *Haaniella*
- Alae fully developed *Heteropteryx*

Key to Genera: Adult Females

- 1. Green or yellow, abdomen strikingly dilated, segment V widest *Heteropteryx*
- Brown, abdomen from segment IV on increasingly narrower *Haaniella*

Key to Genera: Eggs

- 1. Capsule with small, dark spots, or short bristled *Haaniella*
- Capsule uniformly grey, with irregular small, flat impressions *Heteropteryx*

Obriminae

Key to Genera: Adults

- 1. Mesonotum transverse to quadrate, not longer than wide 2. Miroceramiini
- Mesonotum distinctly longer than wide 3.
- 2. Profemora almost straight, only slightly curved basally *Mirocearamia*
- Profemora curved and compressed basally, shorter than pro- and mesonotum
Mearnsiana
- 3. Meso- and metanotum without composite posterior meso- and metanotals
. 4. Eubulidini
- Meso- and metanotum with composite posterior meso- and metanotals 10. Obrimini
- 4. Median mesonotals produced as distinct spines; body elongate *Stenobrimus*
- Median mesonotals absent or tuberculate; body more stout 5.
- 5. Mesonotum without raised triangular area anteriorly *Heterocopus*
- Mesonotum with raised triangular area anteriorly 8.
- 6. Pronotum with two large spines directed anteriorly *Pterobrimus*
- Pronotum without two prominent spines 7.
- 7. Mesonotum only slightly dilating posteriorly *Eubulides*
- Mesonotum trapezoidal, posteriorly nearly twice as wide as anteriorly *Theramenes*
- 8. Pronotum without large spines *Ilocano*
- Pronotum bearing large spines 9.
- 9. Mesonotum flat dorsally, with a distinct median carina *Tisamenus*
- Mesonotum oval in cross-section, median carina absent *Hoploclonia*
- 10. Anterior mesonotals indistinct *Trachyaretaon*
- Anterior mesonotals prominent 11
- 11. Metasternal pseudo-foramina absent *Aretaon*
- Metasternal pseudo-foramina present 12.
- 12. Metasternal pseudo-foramina produced as narrow slits *Obrimus*

- Metasternal pseudo-foramina large, open pits near lateral margin 13.
- 13. Metasternal pseudo-foramina semi-cingulate *Brasidas*
- Metasternal pseudo-foramina completely cingulate *Euobrimus*

Key to Genera: Eggs

- 1. Operculum oval, convex, inserted at an angle of about 45° *Stenobrimus*
- Operculum more or less round, convex or flat 2.
- 2. Capsule around operculum narrowed, posterior pole pointed *Sungaya*
- Capsule bullet-shaped 3.
- 3. Capsule considerably longer than wide, not bristled 5.
- Capsule only slightly longer than wide, bristled 4.
- 4. Operculum inserted horizontally *Tisamenus*
- Operculum inserted in capsule at an angle *Hoploclonia*
- 5. Capsule convex also ventrally or about parallel dorsally and ventrally 6.
- Capsule convex dorsally and concave ventrally *Miroceramia*
- 6. Dorsal and ventral part of capsule parallel 7.
- Capsule slightly convex at least dorsally *Brasidas* and *Euobrimus*
- 7. Posterolateral arms of micropylar plate long, dilated laterad *Trachyaretaon*
- Posterolateral arms of micropylar plate short, not dilated laterad 8.
- 8. Micropylar plate rectangular anteriorly 9.
- Micropylar plate round anteriorly 10.
- 9. Micropylar plate rectangular, with a notch posteriorly *Aretaon*
- Posterior edges of micropylar plate diverging, elongate *Eubulides*
- 10. Operculum with round impression medially *Theramenes*
- Operculum without round impression medially *Heterocopus*

Dataminae**Key to Genera: Adults**

- 1. Antennae distinctly longer than profemora, almost as long as forelegs 2.
- Antennae at best slightly longer than profemora *Planispectrum*
- 2. Mesonotum less than twice as long as pronotum *Dares*
- Mesonotum longer 3.
- 3. Mesonotum and metanotum with large spines, scapus not armed *Epidares*
- Mesonotum and metanotum without large spines 4.
- 4. Mesonotum with prominent median carina 5.
- Mesonotum not carinate medially *Orestes*
- 5. Mesonotum without long spines anteriorly *Pylaemenes*
- Mesonotum armed with two large, anteriorly projecting spines anteriorly *Spinodares*

Key to Genera: Eggs

- 1. Capsule with large impressions laterally *Spinodares*
- Capsule roundly, without impressions laterally 2.
- 2. Micropylar plate projecting, capsule strikingly punctured *Planispectrum*
- Micropylar plate flat, not projecting 3.
- 3. Capsule almost round, posterior arms of micropylar plate at best slightly projecting above half height of capsule *Dares*
- Capsule more elongate, if round, posterior arms of micropylar plate reaching far above

- half height of capsule 4.
- 4. Posterior arms of micropylar plate almost surrounding capsule *Pylaemenes*
- End of posterior arms visible from lateral aspect 5.
- 5. Posterior arms of micropylar plate dilating ventrad; setae very long *Orestes*
- Posterior arms of micropylar plate not dilating ventrad; setae short *Epidares*

Anisacanthidae

Key to Genera: Adults

- 1. Mesonotum at best two times as long as mesonotum 2.
- Mesonotum distinctly more than 2 times as long as pronotum 3.
- 2. Vertex flat *Pseudoleosthenes*
- Vertex raised conically, spinose *Parectatosoma*
- 3. Profemora short, slightly longer than head and pronotum, strongly lamellate
- *Xerantherix*
- Profemora much longer than head and pronotum, moderately lamellate 4.
- 4. Head tuberculate or spinose; in ♀ abdominal tergite X elongated *Anisacantha*
- Head not armed; in ♀ abdominal tergite X not elongated 5.
- 5. Scapus subcylindrical, abdominal tergite VI without lobe dorsally *Leiophasma*
- Scapus very flat; abdominal tergite VI with a lobe dorsally *Parorobia*

Key to Genera: Eggs

- 1. Capsule with raised ridge or pseudo-plate posteriorly 2.
- Capsule at best with a raised knob posteriorly 3.
- 2. Capsule with one raised ridge posteriorly *Xerantherix*
- Capsule with two ridges (pseudo plate) posteriorly *Leiophasma*
- 3. Capsule very finely punctured, with very short setae *Anisacantha*
- Capsule slightly granulated *Parectatosoma*

Bacillidae

Key to Genera: Adults

- 1. Gula present 2. Bacillinae
- Gula absent 4.
- 2. Protibiae without area apicalis 3. Bacillini
- Protibiae with area apicalis Phalcini: *Phalces*
- 3. Antennae of ♂ with more than 19, of ♀ with more than 18 segments *Bacillus*
- Antennae of ♂ and ♀ with less than 18 segments *Clonopsis*
- 4. Body smooth, shiny Macyniinae: *Macynia*
- Body not shiny, rough 5.
- 5. Third antennomere roundly in cross-section 11. Xylicini
- Third antennomere with distinct edge interodorsally 6. Antongiliinae
- 6. Scapus with a spine exteroventrally 8. Pseudodatamini
- Scapus not armed exteroventrally 9. Antongiliini
- 8. Vertex not raised. Body elongate, slender *Cirsia*
- Vertex raised. Body stout, extremities short. *Pseudodatames*
- 9. Body, meso- and metafemora with definite spines 10.

- Body not armed. Meso- and metafemora with lobes *Leprodes*
- 10. Abdomen long, hindfemora much shorter than abdomen *Antongilia*
- Abdomen short, hindfemora more or less reaching tip of abdomen *Onogastris*
- 11. Head between eyes at best tuberculate *Bathycharax*
- Head between eyes with two spines 11.
- 12. Probasitarsus carinate dorsally, without large lobe *Xylica*
- Probasitarsus with large lobe dorsally *Ocnobius*

Key to Genera: Eggs

- 1. Operculum with capitulum Macyniinae: *Macynia*
- Operculum without capitulum 2.
- 2. Operculum inserted in capsule at an angle of 45° Pseudodataminae
Pseudodatames
- Operculum inserted in capsule without significant angle 3. Bacillinae
- 3. Capsule rough or smooth, without irregular ridges 4.
- Capsule with irregular ridges 6. Antongiliinae
- 4. Capsule rough 5. Bacillini
- Capsule smooth Phalcini: *Phalces*
- 5. Operculum flat, without high and broad ridge *Clonopsis*
- Operculum with high and broad ridge *Bacillus*
- 6. Micropylar plate lanceolate, distinctly narrowed anteriad 7. Antongilini
- Micropylar plate not distinctly narrowed anteriad 8. Xylicini
- 7. Capsule with long setae *Antongilia*
- Capsule at best with few very short setae *Leprodes*
- 8. Micropylar plate broadest near micropylar cup *Bathycharax*
- Micropylar plate not broader near micropylar cup, parallel sided *Xylica*

Phyllioidea

Phylliidae

Key to Genera: Adults

- 1. Head with two tubercles posteromedially, wings iridescent, anal region of alae brown Nanophylliini: *Nanophyllum*
- Head with only one tubercle or spine posteromedially, anal region of alae transparent 2. Phylliini
- 2. Mesonotum before tegmina distinctly transverse 3.
- Mesonotum before tegmina almost quadrate 4.
- 3. Anterior half of prosternum without spine *Microphyllum*
- Anterior half of prosternum with distinct spine *Chitoniscus*
- 4. Protibiae with exterior lobes only *P. (Phyllum)*
- Protibiae with interior and exterior lobes *P. (Pulchriphyllum)*

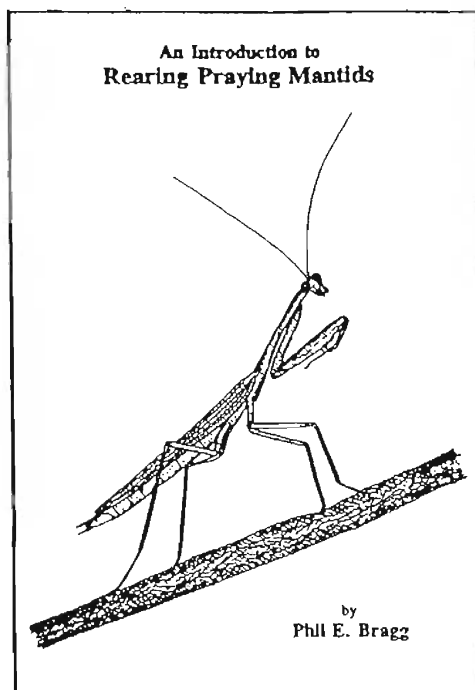
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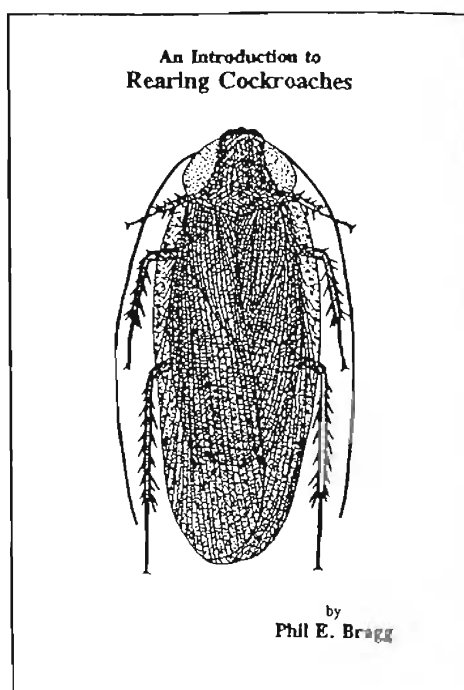
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